



PATENT  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mehmet Toner et al. Art Unit: 1651  
Serial No.: 10/749,369 Examiner: Leon B. Lankford, Jr.  
Filed: December 31, 2003 Customer No.: 21559  
Title: MICROINJECTION OF CRYOPROTECTANTS FOR  
PRESERVATION OF CELLS

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicants submit the references listed on the enclosed Forms PTO-1449. Under 35 U.S.C. § 120, this application relies on the earlier filing date of application serial number 09/859,105, which was filed on May 16, 2001. All but one of the cited references are either U.S. patents or were submitted to the Office in the prior application; therefore, copies of these references are not provided for this application. A copy of the one remaining cited publication is enclosed. A copy of a search report from a corresponding international application is also enclosed.

Submission of this statement is not a representation that a search has been made, nor is the inclusion of information in this statement an admission that the information is material to patentability.

This statement is being filed after a first Office action on the merits, but before the mailing of a final Office action or a Notice of Allowance. A check for \$180.00 in payment of the late submission fee set forth in 37 C.F.R. § 1.17(p) is enclosed.

If there are any charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: June 30, 2005

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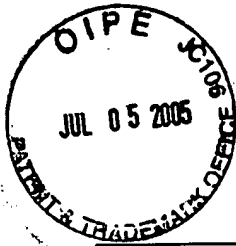
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Sheet 1 of 1

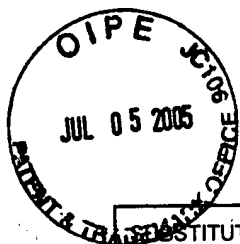
SUBSTITUTE FORM PTO-1449 (MODIFIED)  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)  (37 C.F.R. § 1.98(b))	Attorney Docket No.	50207/002003
	Serial No.	10/749,369
	Applicant	Mehmet Toner et al.
	Filing Date	December 31, 2003
	Group	1651
	IDS Filed	June 30, 2005

U.S. PATENT DOCUMENTS						
Examiner's Initials	Document Number	Publication Date	Patentee or Applicant	Class	Subclass	Filing Date (If Appropriate)
	4,724,206 A	9/2/1988	Rupp et al.			
	5,182,299	1/26/1993	Gullans et al.			
	5,672,502	9/30/1997	Birch et al.			
	6,376,743	4/23/2002	Yanagimachi			
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION						
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)						
	Summers et al., "Chemically Defined Media and the Culture of Mammalian Preimplantation Embryos: Historical Perspective and Current Issues," <i>Hum. Reprod. Update</i> 9:557-582 (2003).					

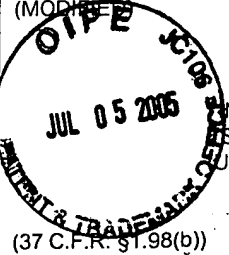
EXAMINER	DATE CONSIDERED
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.	

Sheet 1 of 1

SUBSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Attorney Docket No.	50207/002002	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)  (37 C.F.R. §1.98(b))				Serial No.	09/859,105	
				Applicant	Mehmet Toner et al.	
				Filing Date	May 16, 2001	
				Group	1651	
				IDS Filed	June 12, 2003	
				Customer No.	21559	
U.S. PATENTS						
Examiner's Initials	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date (If Appropriate)
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION						
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
	WO 97 45010	12/04/97	WIPO			No
	WO 98 09514	03/12/98	WIPO			No
	WO 00 15032	03/23/00	WIPO			No
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)						
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Sheet 1 of 1

INSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Attorney Docket No.	50207/002002	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)  (37 C.F.R. §1.98(b))				Serial No.	09/859,105	
				Applicant	Mehmet Toner et al.	
				Filing Date	May 16, 2001	
				Group	1638	
				IDS Filed	January 14, 2002	
				Customer No.	21559	
U.S. PATENTS						
Examiner's Initials	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date (If Appropriate)
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION						
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)						
	Chen et al., "Literature Review: Supplemented Phase Diagram of the Trehalose - Water Binary Mixture," <i>Cryobiology</i> 40:277-282 (2000).					
	Critser et al., "The Cryobiology of Mammalian Oocytes," <i>Reproductive Tissue Banking</i> p. 329-357 (1997).					
	Oktay et al., "Cryopreservation of Immature Human Oocytes and Ovarian Tissue: An Emerging Technology?," <i>Fertility And Sterility</i> 69(1):1-7 (1998).					
	Shanina et al., "A Comparison of a Sucrose-based Solution with Other Preservation Media for Cold Storage of Isolated Hepatocytes," <i>Cryobiology</i> 41:315-318 (2000).					
EXAMINER				DATE CONSIDERED		
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.						

SUBSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Attorney Docket No.		50207/002002	
		INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		Serial No.		09/859,105	
				Applicant		Mehmet Toner et al.	
				Filing Date		May 16, 2001	
				Group		Not Yet Assigned	
				IDS Filed		August 20, 2001	
				Customer No.		21559	
U.S. PATENTS							
Examiner's Initials	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date (If Appropriate)	
	5,496,720	3/5/96	Susko-Parrish et al.	435	240.2	2/10/93	
	5,827,741	10/27/98	Beattie et al.	435	374	11/19/96	
	6,127,177	10/3/00	Toner et al.	435	374	9/11/98	
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION							
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)	
	WO 99/31977 A1	1.7.99	WIPO			No	
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)							
	Beattie et al., "Trehalose: A cryoprotectant that enhances recovery and preserves function of human pancreatic islets after long-term storage," <i>Diabetes</i> 46:519-523 (1997).						
	Donnamaria et al., "Interaction of water with $\alpha,\alpha$ -trehalose in solution: molecular dynamics simulation approach," <i>Chem. Soc. Faraday Trans.</i> 90(18):2731-2735 (1994).						
	Eroglu et al., "Intercellular trehalose improves the survival of cryopreserved mammalian cells," <i>Nature Biotechnology</i> 18:163-167 (2000).						
	Guo et al., "Trehalose expression confers desiccation tolerance on human cells," <i>Nature Biotechnology</i> 18:168-171 (2000).						
	Janik et al., "Overcoming a permeability barrier by microinjecting cryoprotectants into zebrafish embryos ( <i>Brachydanio rerio</i> )," <i>Cryobiology</i> 41:25-34 (2000).						
	Knight et al., "Microinjection of $^{14}\text{C}$ -sucrose and other tracers into isolated phloem strands of heracleum," <i>Can. J. Bot.</i> 52:1491-1499 (1974).						
	Hagedorn et al., "Magnetic resonance microscopy and spectroscopy reveal kinetics of cryoprotectant permeation in a multicompartmental biological system," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 93:7454-7459 (1996).						
	Hagedorn et al., "New approaches for studying the permeability of fish embryos: Toward successful cryopreservation," <i>Cryobiology</i> 34:335-347 (1997).						
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SUBSTITUTE FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE  
(MODIFIED) PATENT AND TRADEMARK OFFICE

Attorney Docket No.

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Serial No.

09/859,105

Applicant

Mehmet Toner et al.

Filing Date

May 16, 2001

Group

Not Yet Assigned

IDS Filed

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Customer No.

21559

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT  
(Use several sheets if necessary)

(37 C.F.R. §1.98(b))

## U.S. PATENTS

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## FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)

## OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)

	Levine et al., "Thermomechanical properties of small-carbohydrate-water glasses and 'rubbers'," <i>J. Chem. Soc., Faraday Trans.</i> , 84(8):2619-2633 (1988).
	Marchase et al., "Glucose phosphotransferase and intracellular trafficking," <i>Molecular and Cellular Biochemistry</i> 72:101-107 (1986).
	Paynter et al., "Permeability characteristics of human oocytes in the presence of the cryoprotectant dimethylsulphoxide," <i>Human Reproduction</i> 14(9):2338-2342 (1999).
	Rayos et al., "Quick freezing of unfertilized mouse oocytes using ethylene glycol with sucrose or trehalose," <i>Journal of Reproduction and Fertility</i> 100:123-129 (1994).
	Russo et al., "Reversible permeabilization of plasma membranes with an engineered switchable pore," <i>Nature Biotechnology</i> 15:278-282 (1997).

EXAMINER

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